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# DEVELOPING A MODEL OF THE BEHAVIOURAL INTENTIONS OF OLDER ADULTS TOWARDS INTERNET SERVICE PROVIDERS: A UK PERSPECTIVE

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**Abstract**

*Countries around the globe are facing an ageing population that faces problems such as, cognition, memory and visionary problems. Mobile devices and products are also part of daily life and to utilise them, the role of Internet Service Providers is essential. This research in progress paper aims to identify and evaluate factors that influence the older population's (≥ 50 years) selection of an Internet service provider (ISP) as well as their continuous intention and behaviour to remain with the ISP. Contributions to policymakers, academia and industry are viewed to be the outcomes of this research study.*

**Keywords:** *Internet Service Providers, Older adults, Behaviour, Post-adoption*

## 1.0 Introduction

Globally, countries are facing an ageing population (Christensen et al. (2009); Jacobzone et al. (1998). This has meant that countries have begun to attend to the needs and requirements of an older population, much more than in previous years such as, the 1970s or 1980s.

Older adults also require importance as economically they are providers and holders of wealth (Lusardi & Mitchell, 2007; Börsch-Supan, 1992). To clarify matters, older adults are recognised in this research as individuals of 50 years and above due to research evidence suggesting that age related issues such as, cognition, memory, visionary problems begin in individuals at the age of 50 years or above (Olphert et al,

2005; Allen et al., 2005; Faulkner et al., 2007; Pan & Jordan-Marsh, 2010; Cotten et al, 2012). To further distinguish between the older adults population, a categorisation developed by researchers is useful (Lee et al., 2011). Lee et al (2011) segmented the older adult population into three categories: pre-seniors (aged 50-64); young-old (aged 65-74); and older-old (aged 75+).

Information and Communication Technologies (ICT) have become essential for daily life activities since they provide independence, empower individuals, increase civic participation and provide real time information (Dutton et al, 2005; Klobas & Clyde, 2000). ICT refers to any digital device or product that is used for communication, representation and networking (Lyytinen & Rose, 2003; Selwyn, 2004), which includes mobile phones, the Internet, computer hardware and software and digital broadcasting technologies. Internet service providers (ISPs) are facilitators for the use of Information and Communication Technologies (ICT) (Rao, 2000). ISP is also a resultant effect of the arrival of ICT into society (Javalgi et al., 2004; Erevelles et al., 2003). The selection and continuing use of ISP also poses to be a challenge for society, including the older population (Javalgi et al., 2004; Erevelles et al., 2003). From literature reviews it was identified that a gap exists in research; therefore, the aim of this study is *to develop a model that identifies and evaluates factors that influence the older population's (≥ 50 years) selection of an Internet service provider (ISP) as well as their continuous intention and behaviour to remain with the ISP*.

Few studies consider the behaviour of older adults when considering purchasing or continuing with the same provider; therefore, this is recognised as an important contribution of this research. There are also few studies examining the post adoption stage of older adults' research; hence also viewed to be important for academic research. Although ISPs in the United Kingdom (UK) are from the private sector, their regulations, established policies and standards are driven by the public sector in the form of the regulatory body, OFCOM. As this research intends to address issues from a consumers' and ISP perspective, policy-makers will find such research useful. For industry, this research should make a contribution, as it will provide an understanding on individuals' behaviour towards adopting and using ICT.

To familiarise readers with this paper, following this introduction, the next section explains the theoretical foundations of this research. Section three then provides the conclusion along with the future directions and limitations of this research.

## 2.0 Theoretical Background

Previous Information system (IS) studies have attempted to understand the adoption and usage behaviours of individuals in the ICT realm using theories from a socio-psychological background (Al-Debei et al., 2013; Hong et al., 2006; Bhattacherjee, 2001b; Hsieh et al., 2008; Rogers, 2010). In such studies, constructs drawn from TAM, DOI and TPB highlight the important role of individuals, social influences and organisational members on the behavioural intentions of individuals. This led to this research utilizing the Decomposed Theory of Planned Behaviour (DTPB), expectation confirmation theory (ECT) and a subset of diffusion of innovation theory (DOI) as a theoretical basis for explaining users' decision-making process and intention to continue using an ISP.

### 2. 1 DTPB and DOI

The initial adoption of an ISP requires prior acceptance of ICT products and services. The diffusion of innovation (DOI) theory proposed by Rogers (2010) is a model widely used to explain adoption and acceptance behaviours. To achieve this, a variation of factors such as individual characteristics, information sources, communication channels and innovation characteristics are used (Taylor & Todd, 1995). Further, the DOI theory uses technology adoption variables such as relative advantage, ease of use, compatibility, observability and triability. For this research DOI was viewed as important as this research is focused on understanding the adoption and acceptance of ISP from the perspective of older adults. To employ DOI in this research, the factor information source is drawn and will be used as an element for explaining the secondary influence in DTPB subjective norm.

From the Theory of Planned Behaviour (TPB) (Ajzen, 1991) is an extension in the form of the decomposed theory of planned behaviour (DTPB) theory (Taylor & Todd, 1995). Decomposing the attributes of TPB into some belief dimensions formed the DTPB. It proposes a person's behavioural considerations towards performing certain activities usually being driven by factors such as attitude, subjective norm and perceived behavioural control (Wu & Wang, 2005). These factors are also known as

determinants of intention (Taylor & Todd, 1995). Further, DTPB model highlights that each of these determinants of intention is linked to certain belief dimensions including attitudinal beliefs, normative beliefs and control beliefs. For instance, perceived usefulness is viewed in the context of attitudinal belief (Taylor & Todd, 1995). In this case, for an older adult to develop an attitude towards an ISP, he or she will assess the benefits that will be derived from the ISP. DTPB is applied in this research by utilising the factors attitude and subjective norm as ways of explaining older adults' decision-making process of an ISP.

### 2.2 Expectation Confirmation Theory

The ECT model proposed by Bhattacherjee (2001b) is a dominant theoretic referent for explaining continuance/discontinuance behaviours (Wang et al., 2013). Variables such as, expectation, confirmation and satisfaction are used to understand post-adoption intentions. The ECT model has been successfully applied within several post-adoption studies (Bhattacherjee, 2001b; Bhattacherjee, 2001a; Limayem & Cheung, 2008; Thong et al., 2006). These studies largely suggest that customer's satisfaction with a service or product is a predominant construct for measuring continued usage intention. Also, a person's expectation about a product or services usually forms the baseline for confirmation when actually using the product or service, which in turn will determine their satisfaction (Limayem & Cheung, 2008). ECT theory highlights that users experience, beliefs, attitudes, intentions and post-purchase decisions are interlinked (Bhattacherjee & Premkumar, 2004). Therefore, this theory is useful for explaining older peoples' post adoption behaviour towards an ISP.

Combining the aforementioned theories and five key variables including attitude, service quality, subjective norm, satisfaction and continuous usage intention a research model and hypothesis have been formed. These are detailed in the following section.

### 2.3 Attitude

Individuals emotional factors along with their individual goal has a strong effect on their decisions (Löckenhoff & Carstensen (2007). The attitude factor has been identified as a key predictor of human behaviour towards ICT usage (Taylor & Todd, 1995). It is classified as an individual's response towards a concept or performing

certain behaviour (Chau & Hu, 2001). Previous studies have linked attitude to two constructs from TAM: perceived usefulness and perceived ease of use. Perceived usefulness and perceived ease of use will be used in an attitude context for this research. ***'Perceived ease of use'*** is the extent to which an individual believes a certain system will be free of complexities (Lee, 2010). It is described to usually have a direct impact on individual's attitude. Additionally, Vijayasarathy (2004) commented that a person's belief on how easy it is to use a technology sometimes has an impact on their perception of its usefulness. Therefore, indicating that there is also a link between perceived usefulness and perceived ease of use. ***'Perceived usefulness'*** on the other hand is the extent to which an individual believes that using a certain system adds value to his or her life (Limayem & Cheung, 2008). It was identified as a key factor for developing attitude which helps in shaping individuals' satisfaction and in turn, their intention to use a technology. For this understanding, the following hypotheses were formed:

**Table 1: Hypotheses statements for the attitude variable**

| | **Hypotheses** |
|---|---|
| **H1** | *A user's attitude has a direct influence on the user's satisfaction towards an ISP* |
| **H1a** | *The perceived ease of use of an ISP's product or services will have a positive influence on a user's attitude towards the ISP* |
| **H1b** | *The perceived ease of use of an ISP's product or service will have a significant impact on its perceived usefulness* |
| **H1c** | *The perceived usefulness of an ISP's product or service is a dominant factor for shaping users attitude towards an ISP* |

### 2.4 Service quality

One of the major determinants of IS success is service quality (Delone & Mclean (2004). In this research, service quality is used in the context of the confirmation construct in ECT (Bhattacherjee, 2001a). Service quality is used to describe a

consumers' perception of what a standard service should deliver and measured against what is delivered (Zhao et al., 2012). It reflects a customer's assessment and judgement of the services provided by the supplier. This judgement has the potential of shaping users attitude and satisfaction (Zhao et al., 2012). Service quality has been examined from different perspectives (Kim et al., 2004; Zhao et al., 2012; Wang & Lo, 2002; Delone & Mclean, 2004). For this study's purpose, the following hypotheses have been formed:

**Table 2: Hypotheses statement for the service quality variable**

| | **Hypotheses** |
|---|---|
| **H2** | *The quality of service provided by an ISP will have a direct influence on user's satisfaction* |
| **H2a** | *The quality of service provided by an ISP will have a significant influence on a user's attitude* |
| **H2b** | *Customer support is a significant predictor of service quality* |
| **H2c** | *Pricing plans is a significant predictor of service quality* |
| **H2d** | *Network quality is a significant predictor of service quality* |
| **H2e** | *Value added services is a significant predictor of service quality* |

### 2.5 Subjective norm

Subjective norm drawn from DTPB addresses the impact of social influence on individuals' behavioural intentions. It refers to an individual's perception or normative belief about how significant referent groups expect him or her to behave towards a particular system (Venkatesh et al., 2003; Lee, 2010). Although it is described as a weak attribute for explaining intentions and behaviours, it is usually useful during the pre-adoption stage (Taylor & Todd, 1995). This is due to its assisting in explaining how initial expectations are built and help to confirm the usefulness of the product or service; thereby, forming an attitude towards the product or service. Subjective norm also deals with how information sources impact a person's behaviour. For instance, a consumer's expectation about a certain product could be subject to the information gathered by viewing a product's advertisement.

Further, sources of information can be split into primary and secondary sources. ***'Primary sources'*** otherwise known as interpersonal influence describes the perceived effect of the opinions and recommendation of important personalities in the individual's life on behavioural intentions (Bhattacherjee, 2000; Taylor & Todd, 1995). It emphasizes specific values and needs related to the individual, which will help to form their expectations, attitudes and satisfaction (Agarwal & Prasad, 1998). Contrastingly, ***'Secondary sources'*** describes the perceived effect of mass media channels on individuals' behavioural intentions towards a technology (Dwivedi et al., 2010). Rogers (2010); Agarwal & Prasad (1998) It is suggested that mass media such as newspapers, television, Internet and radio play a key and effective role in shaping users expectations when evaluating different options as well as eventually making a choice (Rogers, 2010; Agarwal & Prasad, 1998). The influence of subjective norm on individual's behaviour is tested using the following hypotheses:

**Table 3: Hypotheses derived for the subjective norm variable**

| | **Hypotheses** |
|---|---|
| **H3** | *Subjective norm has an indirect influence on users satisfaction* |
| **H3a** | *Subjective norm has an influence on the expectations of service quality* |
| **H3b** | *Subjective norm moderates the link between service quality and satisfaction* |
| **H3c** | *The opinions of significant others about an ISP has an impact on users decision-making towards the ISP* |
| **H3d** | *Information gathered from mass media about an ISP has a significant impact on users decision-making towards the ISP* |

### 2.6 Satisfaction and Continuous intention

Most consumer behaviour studies have found users' satisfaction to be a predominant antecedent of continuance intentions towards IT use (Limayem & Cheung, 2011; Erevelles et al., 2003; Bhattacherjee, 2001b; Bhattacherjee, 2001a; Kim et al., 2011). Users' satisfaction is identified as one of the factors for measuring IS success (Delone & Mclean, 2004). Additionally, in a competitive environment among businesses such as ISPs, enhancing customers' satisfaction is a critical factor for gaining and improving market shares and profitability (Zhao et al., 2012). Bhattacherjee (2001b) elaborated on the importance of satisfaction saying that a satisfied customer is usually

less expensive and a useful source of advertisement. Satisfaction is the term used to describe people's positive feeling of fulfilment derived from the performance of a product or service (Erevelles et al., 2003). For this research, satisfaction depends on users' attitude, service quality and subjective norm. To determine this issue, the following hypotheses have been formed.

**Table 4: Hypotheses statements for the satisfaction and continuance intention constructs**

| | **Hypotheses** |
|---|---|
| **H4** | *The satisfaction derived from an ISP's product and services has a significant effect on the user's intention to continue using the ISP* |
| **H5** | *A user's intention to continue with an ISP is the resultant effect of the satisfaction derived from using the ISP* |

To conceptualize this understanding, a research model is provided in figure 1.

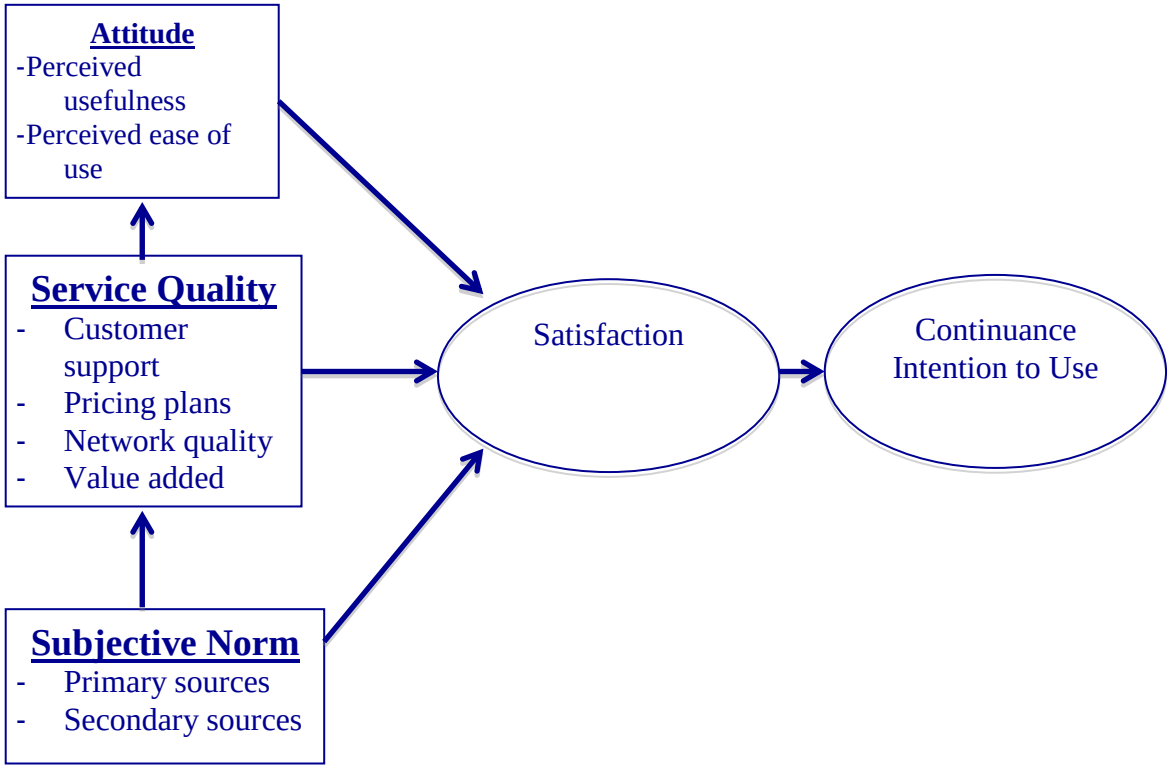


**Figure 1: The Research Model**

## 3. 0 Conclusions

This research in progress paper explains how research with an aim to *identify and evaluate factors that influence the older population's (≥ 50 years) selection of an Internet service provider (ISP) as well as their continuous intention and behaviour to remain with the ISP* will be completed. For this reason, the theoretical foundations as well as a background to the problem were provided. It is recognised that currently this research is in development stages. To overcome this, further research involving the application and development of a pre-construct validity test and pilot are essential. From these activities, the appropriateness of applying the constructs for primary data collection of primary data can be determined.

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